

***Halimolobos perplexa* (Henderson) Rollins var.  
*perplexa***  
puzzling rockcrest  
Brassicaceae (Mustard Family)

**Status:** State Threatened

**Rank:** G4T3S1

**General Description:** Adapted from Hitchcock et al. (1964): *Halimolobos perplexa* var. *perplexa* is a grayish perennial or biennial, covered with stalked, coarse, star-shaped hairs. The one to several stems are usually sparingly branched from near the base, and 4 to 14 in. (10-36 cm) tall. Our Washington plants tend to have stems that are appressed to the ground, unlike the erect plants collected in Idaho. The leaves are greenish-gray. Numerous basal leaves arise from short stalks, and are arranged in a rosette; the basal leaves are  $\frac{3}{4}$  to 2 in. (2-5 cm) long, oblanceolate, and deeply toothed to shallowly lobed. The several stem leaves are usually reduced in size, with the upper ones lacking a stalk, and are entire to more deeply toothed than the basal leaves. The elongated inflorescence is unbranched and loose when in fruit. The stalks of the flowers are slender,  $\frac{1}{4}$  to  $\frac{1}{2}$  in. (5-10 mm) long, and spreading to ascending. The outer sepals are bag-shaped at the base. The petals are white, sometimes pinkish tinged, and 1/8 to 1/3 in. (3-8 mm) long. The style is less than 1/16 in. (0.3-0.6 mm) long. The fruits (siliques) are ascending to erect, nearly cylindrical, usually covered with star shaped hairs,  $\frac{1}{2}$  to  $\frac{3}{4}$  in. (1-2 cm) long, 1/16 in. (1-1.2 mm) thick, and strongly constricted between the seeds.

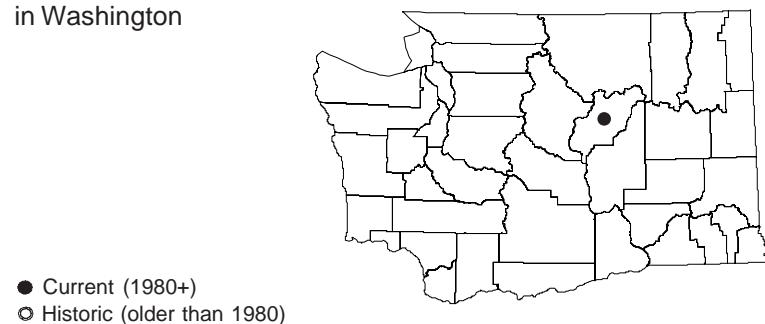
**Identification Tips:** There are two varieties of *Halimolobos perplexa*: var. *perplexa* and var. *lemhiensis*. Variety *lemhiensis* is only known from central Idaho and western Montana. The leaves of var. *perplexa* are greenish-gray and less densely pubescent than var. *lemhiensis*, which has densely pubescent, gray leaves. The styles of var. *perplexa* are less than 1/16 in. (up to 0.6 mm) long, whereas the styles of var. *lemhiensis* are 1/16 in. (1-1.5 mm) long or longer. Within Washington, *H. perplexa* var. *perplexa* may be mistaken for *H. whitedii*, and can be distinguished by the following. *H. perplexa* var. *perplexa* is 4 to 14 in. (10-36 cm) tall with basal leaves that are up to 2 in. (5 cm) long, versus *H. whitedii* which is 8 to 20 in. (20-50 cm) tall, with basal leaves that are up to 4 in. (10 cm) long. The siliques of *H. perplexa* var. *perplexa* are strongly constricted between the seeds, whereas the siliques of *H. whitedii* are not at all or very slightly constricted between the seeds. Our plants of *H. perplexa* var. *perplexa* are also decumbent (lying flat on the ground) and associated with open bare soil, while *H. whitedii* is upright and associated with rocky areas.

***Halimolobos perplexa* var. *perplexa***  
puzzling rockcrest



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**Known distribution**  
of *Halimolobos perplexa*  
var. *perplexa*  
in Washington



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**Phenology:** In Washington the taxon was observed in fruit and late flower in May.

**Range:** Until recently *Halimolobos perplexa* var. *perplexa* was thought to be endemic to Idaho. In Washington it occurs in Douglas County, several hundred miles west of its known range in Idaho.

**Habitat:** This taxon was found in lithosol and bare clayish soil with scattered rock, at 1700 ft. elevation. Associated species include thymeleaf buckwheat (*Eriogonum thymoides*), Sandberg bluegrass (*Poa secunda*), linearleaf fleabane (*Erigeron linearis*), cheatgrass (*Bromus tectorum*), Oregon bitterroot (*Lewisia rediviva*), Thurber's needlegrass (*Stipa thurberiana*), woolly plantain (*Plantago patagonica*), and large-fruit desert-parsley (*Lomatium macrocarpum*).

**Ecology:** The Washington population occurs in a significantly different habitat than the Idaho populations. In Idaho the taxon is found on steep, rocky slopes in a forested area.

**State Status Comments:** In Washington this taxon is known from one small population of less than 15 individuals.

**Inventory Needs:** Open areas with clay-rich soils in the Moses Coulee area of central Douglas County should be surveyed for this taxon.

**Threats and Management Concerns:** Definite threats have not been identified for *Halimolobos perplexa* var. *perplexa*. However, the small range of this taxon in Washington and the single occurrence is a major concern.

### References:

Hitchcock, C.L., A. Cronquist, M. Ownbey, J.W. Thompson. 1964. *Vascular Plants of the Pacific Northwest Part 2: Salicaceae to Saxifragaceae*. University of Washington Press, Seattle, WA. 597 pp.